SCIENCE AND TECHNOLOGY ASSESSMENT AT THE LABORATORIES

Peer review is a critical tool used by the University for evaluating the quality of the science and technology (S&T) and the performance of mission objectives at the Laboratories. Over many years, UC and the Laboratory leadership have developed and refined a robust set of complementary, independent peer reviews that draw on many of the best minds from academia, industry, and government.

The two major elements of the existing external peer review tiered structure are a number of committees that report to the Laboratory Director (Division, Directorate and Program Review Committees), and a UC Presidential advisory body (UC President's Council on the National Laboratories) and its supporting Panels.

Division, Directorate and Program Review Committees. External peer review committees evaluate the scientific and technological performance of the technical organizations and programs at the Laboratories and provide their assessments and advice to the senior Laboratory leadership. These committees meet at least annually and are composed of prestigious peers representing a spectrum of academia, industry, private consulting, and government drawn from across the nation. They are expert in the gamut of activities conducted by the organization/program, and provide a candid assessment of the strengths and weaknesses of the work reviewed. They also focus on the long-term vitality, future direction, and strategic planning for the unit, maintenance and growth of core competencies, and recruitment/retention and skill mix issues. At this level, these committees are able to delve into the organization/program in significant depth and are able to provide specific evaluations, advice and recommendations to the leadership of the unit and the Laboratory. The Committee meetings are attended by members of the President's Council Panels, and the Committee reports feed into the Council's evaluation process (see below).

President's Council. The UC President's Council on the National Laboratories advises the UC President on all matters related to the management and operation of the Laboratories. Council members are individuals who have extensive management, policy, or technical expertise across a broad spectrum of science, technology, and defense topics. National prominence is an important criterion for membership so that the Council's views will be respected both within and outside of the University, and UC faculty members are well represented.

In order to carry out its charge more effectively, the Council functions through five expert panels -- three more operational in character, and two more programmatic/scientific in nature. All Panels are composed of people prominent in the fields reviewed, and UC faculty members are particularly well represented in the latter two Panels.

- Project Management Panel. Assesses the project management systems and the conduct and staffing of major, scientifically complex construction projects to

ensure their effective management, review and implementation. The Panel is beginning to work with the Laboratories to also apply sound project management techniques to execution of complex programs, wherever beneficial.

- Laboratory Security Panel. Reviews the policies and procedures that the Laboratories develop and implement to respond to constantly changing security threats. This includes protection of assets, including special nuclear material, classified parts, sensitive information, and the vast computing resources at the Laboratories.
- Environment, Safety and Health Panel. Reviews methods for ensuring the safety and health of Laboratory workers and the general public and protection of the environment, and for achieving compliance with applicable legislative and regulatory requirements.
- National Security Panel. Advises the Council on national security issues, including the Stockpile Stewardship Program that was established to assure the safety and reliability of the enduring stockpile in the absence of nuclear testing. Also reviews the threat reduction programs, including non-proliferation, counter-proliferation, and homeland security efforts. This Panel also has a subgroup that reviews special compartmentalized efforts in the intelligence arena. Because of the relative paucity of peers in this nationally important area, the Panel stresses the peer review, or "red-teaming," that the two Laboratories provide for each other's ideas and work, as well as their mutual cooperation and collaboration with the broader scientific community including UC campuses.
- Science and Technology Panel. Has the primary responsibility within the Council for assessment of the quality of the S&T programs of the Laboratories and prepares an annual evaluation of that performance for the President's Council. Major sources of input for its report are the reports of the Division, Directorate and Program Review Committees (above), feedback from Panel members attending those meetings or involved in other Laboratory activities, the Panel's own meetings held throughout the year at the Laboratories, input from other Council Panels and other reviews, customer feedback, and Laboratory self-assessments. The Panel's report is validated and/or modified by the Council for transmittal to the UC President and, through the President, to the Department of Energy. The Panel also advises Laboratory leaders and the UC President on factors affecting the health of the research environment, effectiveness of organizational structures and functioning, strengths of research personnel, recruitment/retention and training of personnel, leadership development, factors affecting the Laboratories' ability to carry out the technical work, and quality of the Division/Directorate/Program Review Committees and the evaluation process.